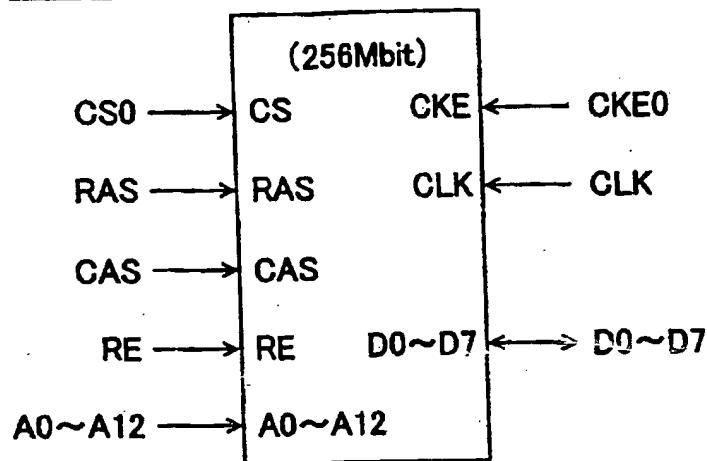


FIG. 1



**FIG.2**

**BANK1**



**BANK2**

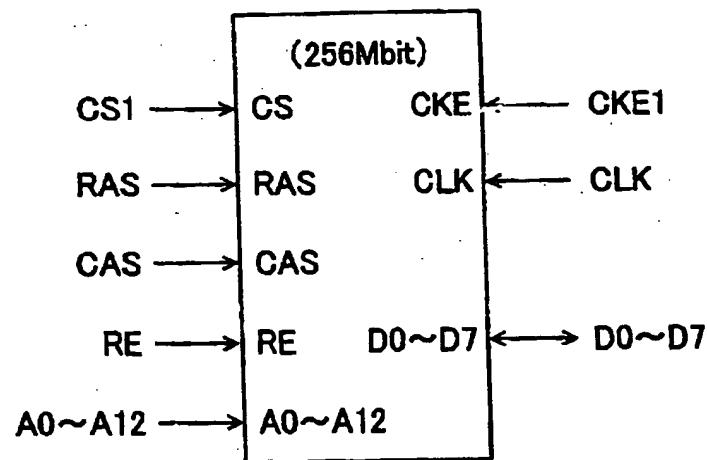
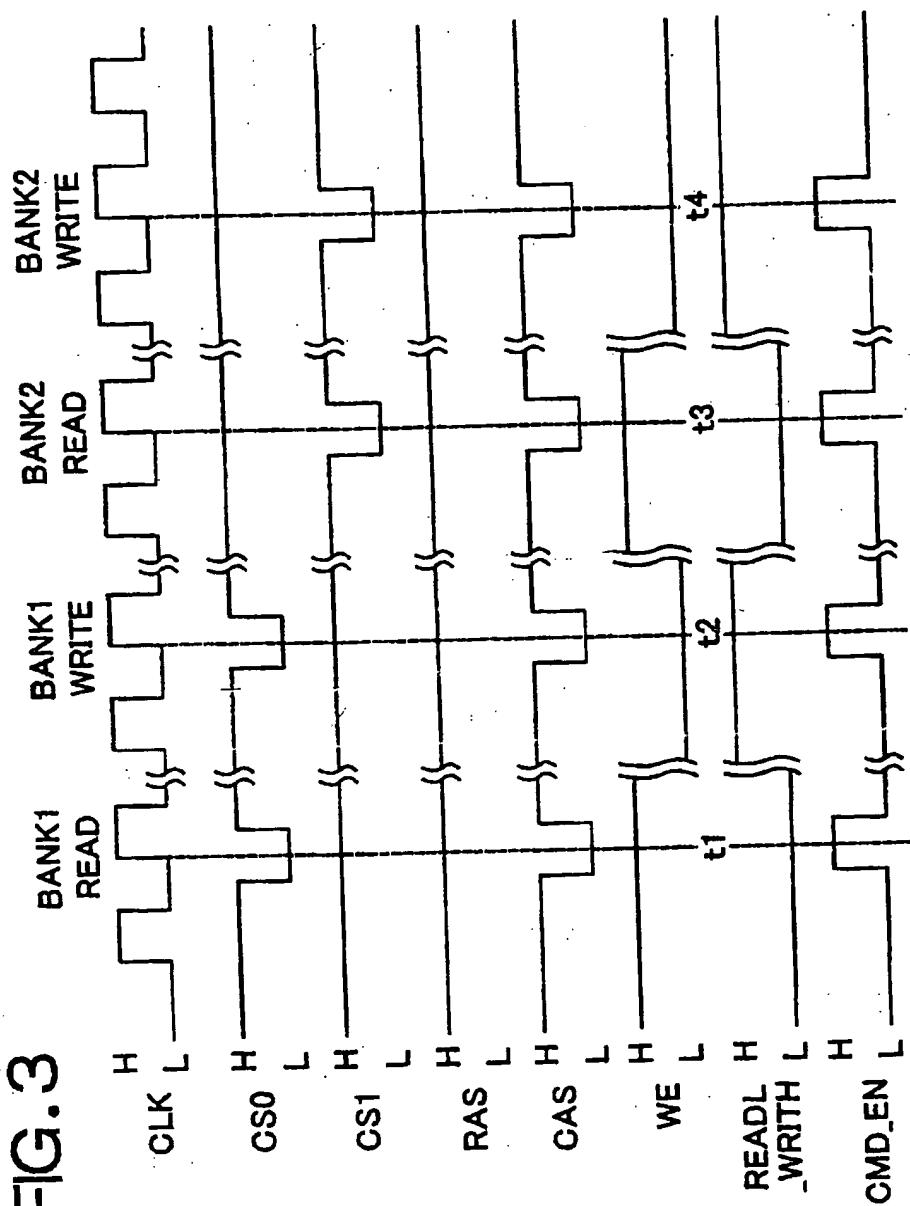




FIG. 3



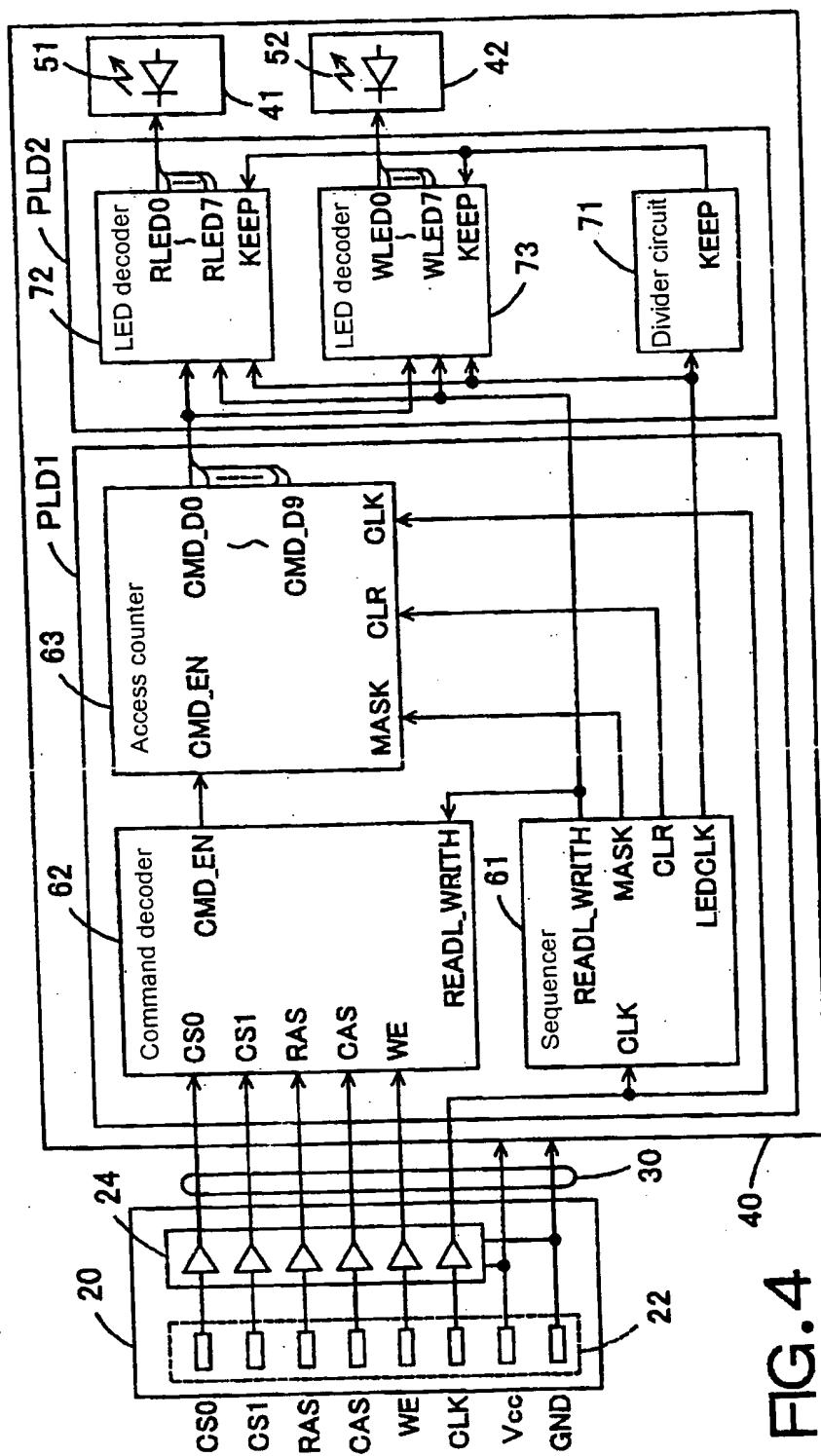


FIG. 4

FIG. 5

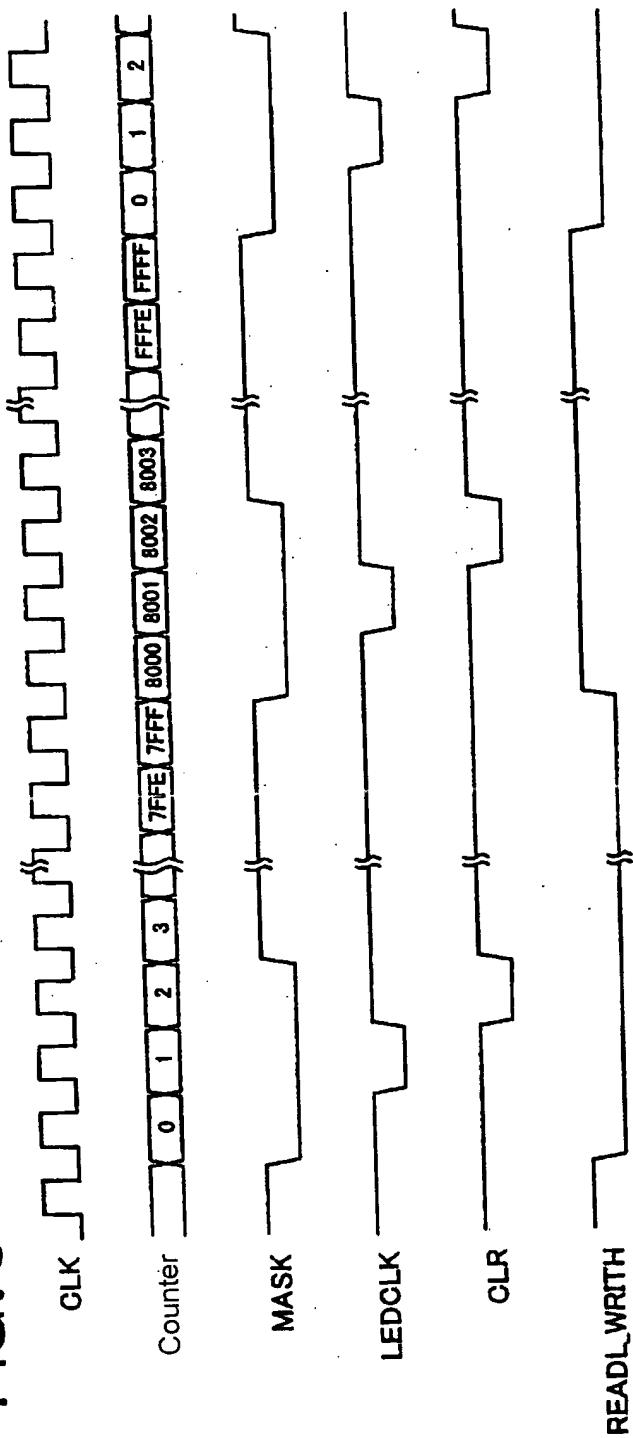




FIG. 6

T1

Counter	Output
0 0 0	MASK → L
0 0 0	LEDCLK → H
0 0 0	CLR → H
0 0 0	READL_WRITH → L
0 0 1	LEDCLK → L
0 0 2	LEDCLK → H
0 0 2	CLR → L
0 0 3	CLR → H
0 0 3	MASK → H
8 0 0	MASK → L
8 0 0	READL_WRITH → H
8 0 1	LEDCLK → L
8 0 2	LEDCLK → H
8 0 2	CLR → L
8 0 3	CLR → H
8 0 3	MASK → H



FIG. 7

Command decoder 62

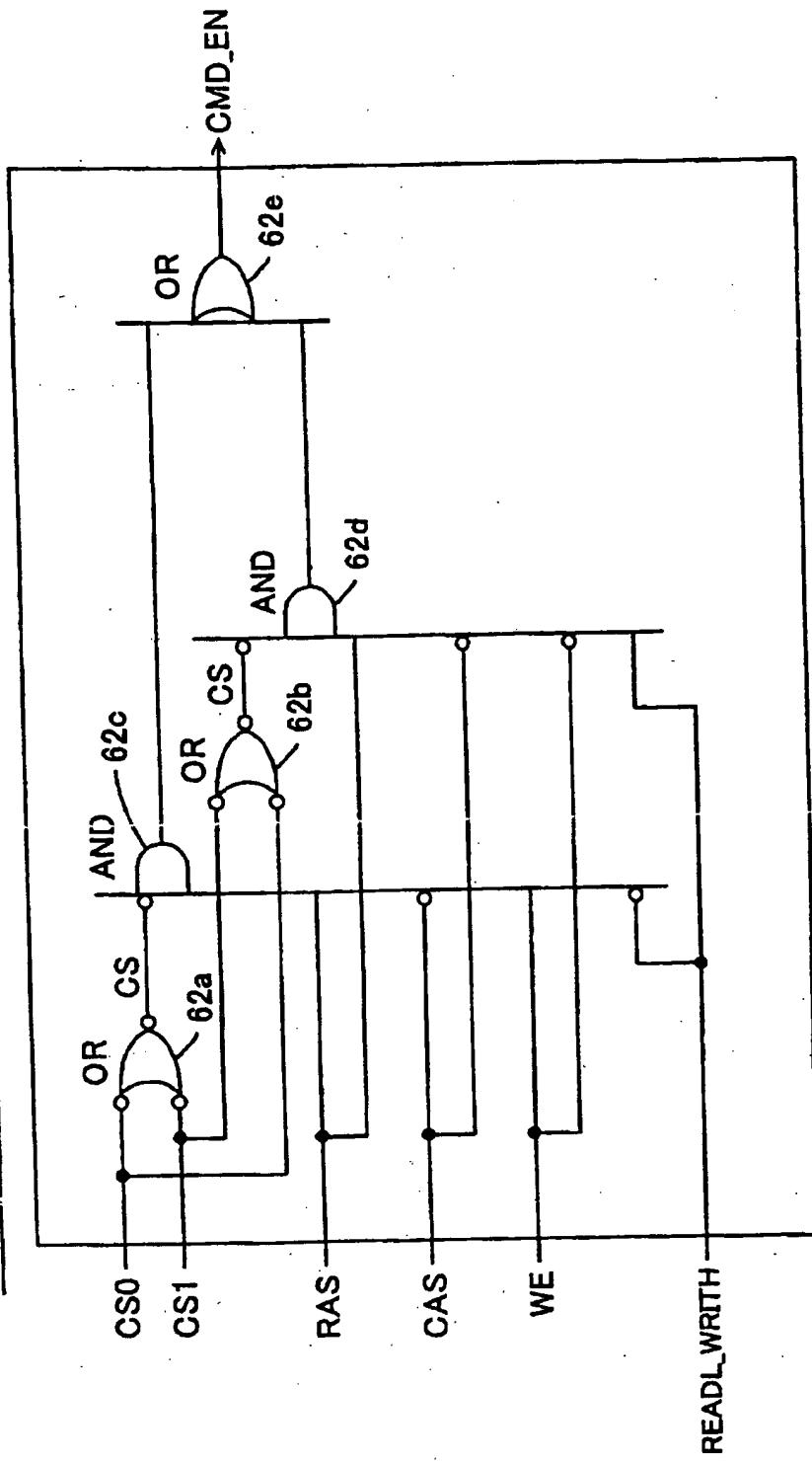




FIG. 8

FUNCTION TABLE

Input					Output	
CS	RAS	CAS	WE	READLWRITH	CMD_EN	
X	X	X	X	X	L	L
L	L	X	H	X	L	L
H	L	L	L	L	H	H
L	L	L	L	L	L	L



FIG. 9

Access counter 63

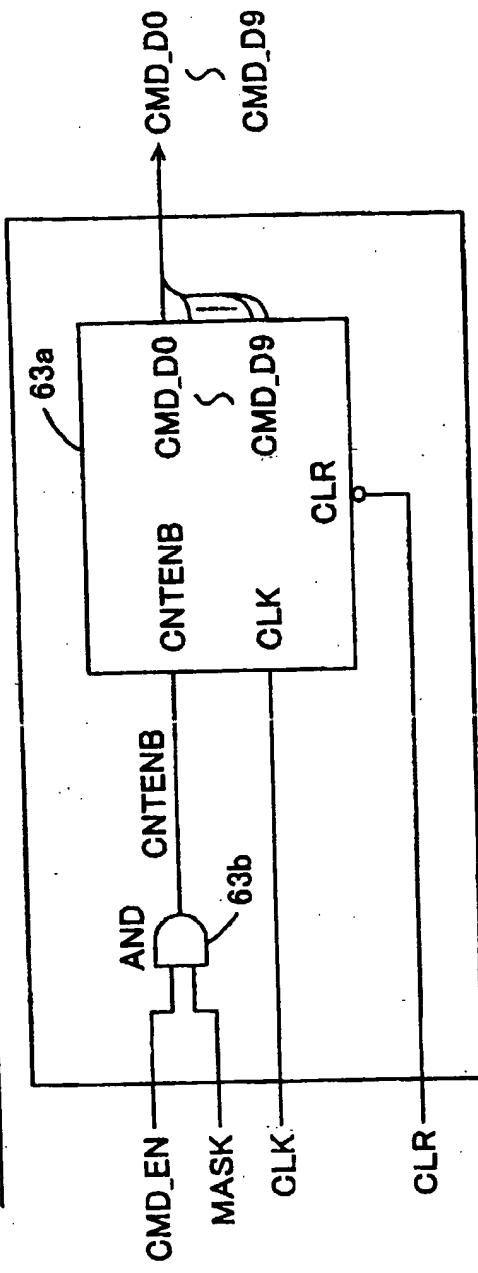




FIG. 10

FUNCTION TABLE

Input				Output
CMD_EN	MASK	CLR	CLK	CMD_D
X	X	L	X	All bit "0"
L	L	H	X	Stop count
	L	H	X	
	H	H	X	
H	H	H	↑	Increment count 0000000000 ← 0000000001 ↓ 1111111110 1111111111 ←



FIG. 11

Divider circuit 71

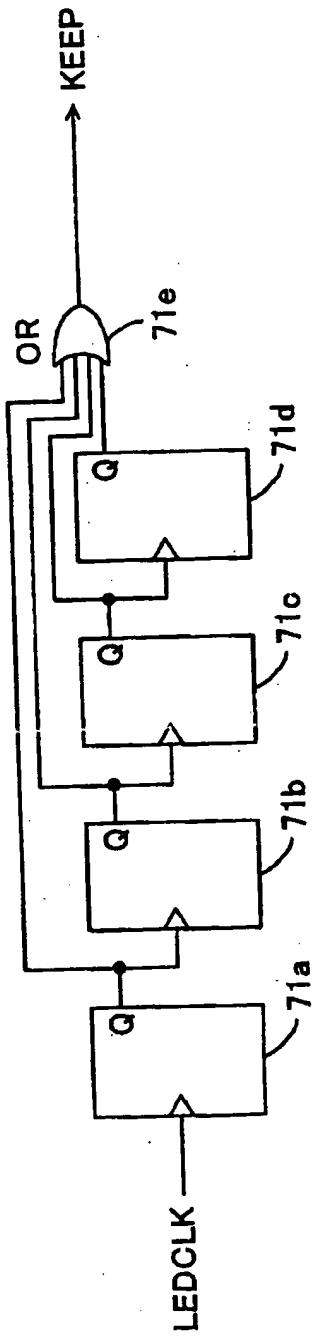




FIG. 12

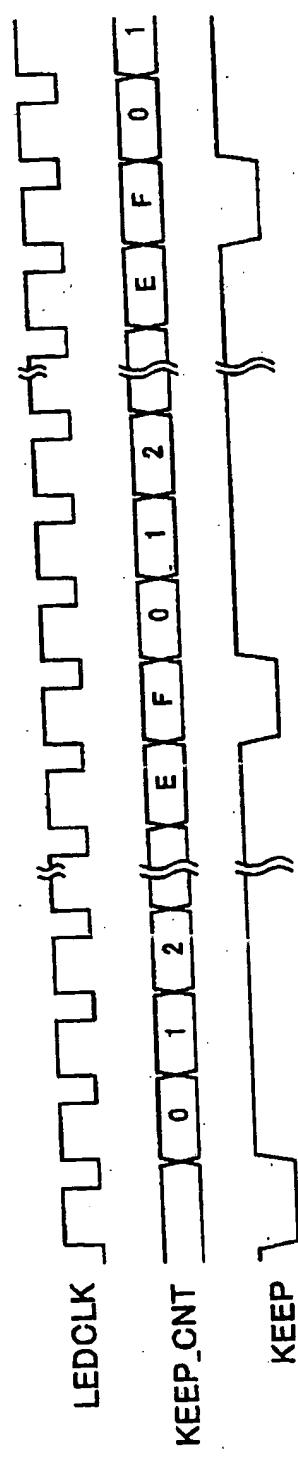




FIG. 13

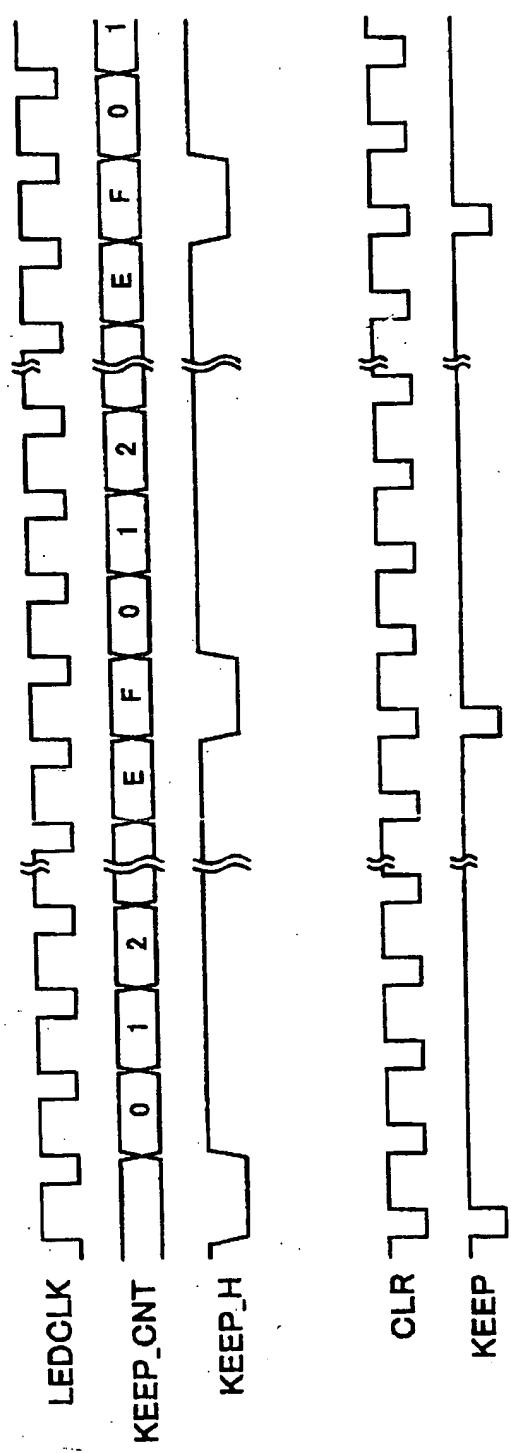




FIG. 14

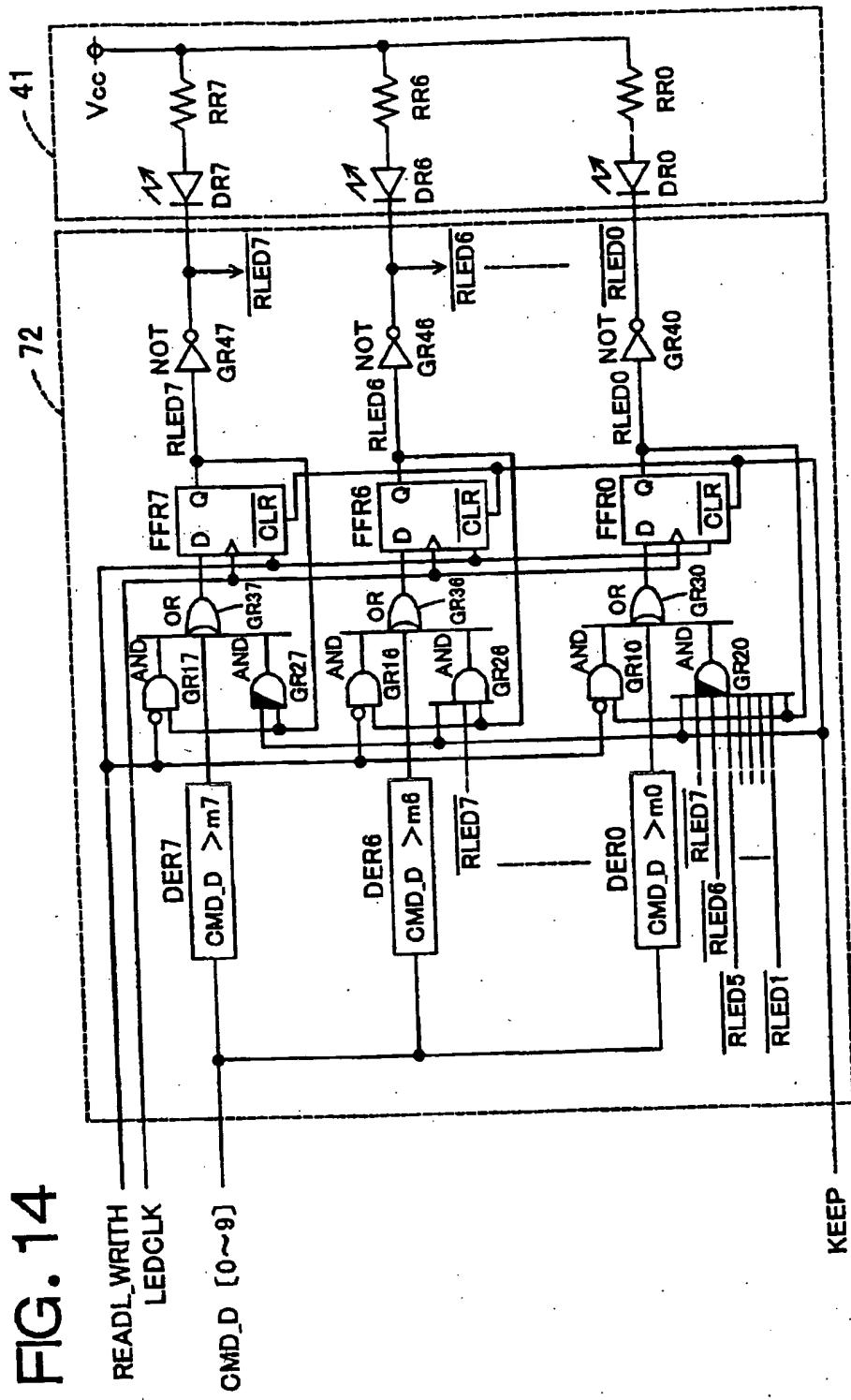




FIG. 15

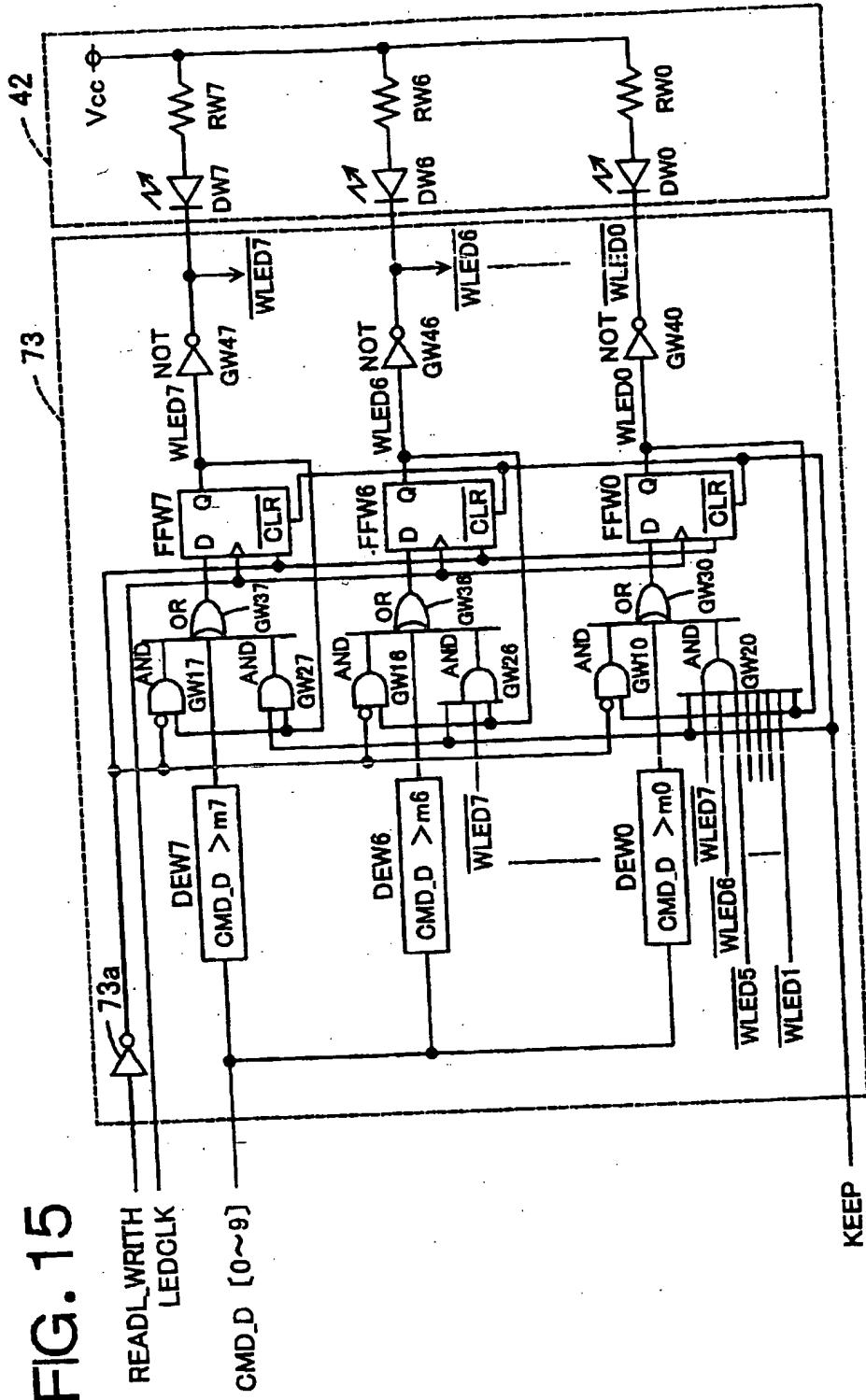
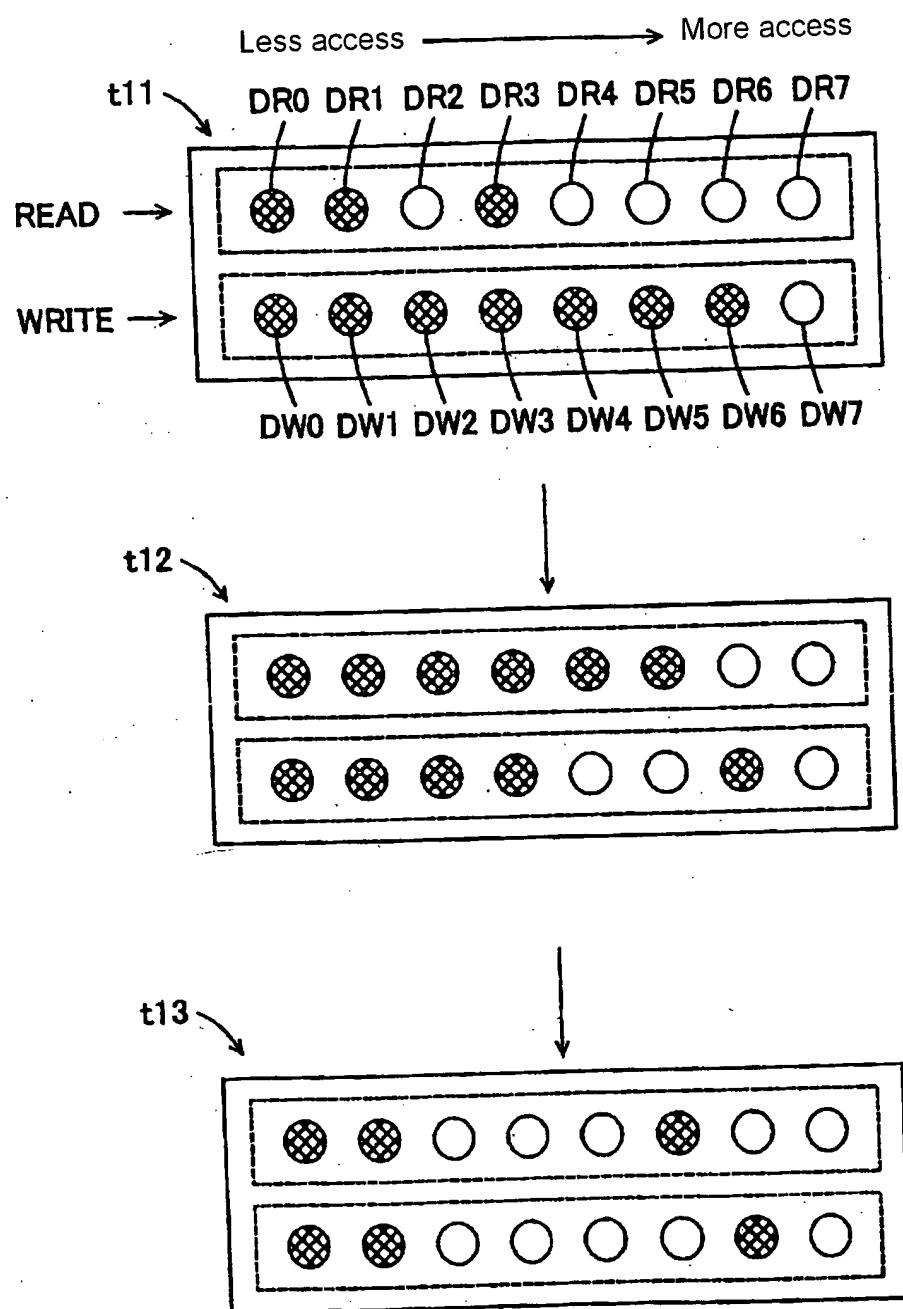




FIG. 16





## FUNCTION TABLE

FIG. 17



FIG. 18

FUNCTION TABLE

Input					Output		
READL	WRITH	DERi	RLEDi	KEEP	$\overline{RLEDi}$	LEDCLK	RLEDi
X	X	X	X	L	X	X	L
L	X	X	X	H	X	X	L
H	L	L	L	H	X	X	H
H	H	X	X	H	H	X	H
H	L	H	H	H	H	ALL H (L)	L
H	L	L	L	H	H	X	L

j = i+1 ~ 7



FIG. 19

FUNCTION TABLE

Input				Output		
READL	DEWI	WLEDi	KEEP	<u>WLEDj</u>	LEDCLK	WLEDi
X	X	X	L	X	X	L
H	X	X	H	X	X	WLEDi
L	L	L	H	X	—	L
L	H	X	H	X	—	H
L	L	H	H	ALL H	—	H
L	L	L	H	H	—	L

j = i+1 ~ 7



FIG. 20

